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Author(s): Ruby Tynan

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“No pain, no gain”: Former elite female gymnasts’ engagement with pain and injury discourses

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Abstract

This research investigates the discourses influential in former elite female artistic gymnasts' engagement with pain and injury. The purpose of this study was to examine participants' engagement with pain and injury discourses and interrogate the ways in which certain discourses became dominant. Despite extensive sociological research providing exposure to the ways in which athletes experience pain and injury, there is little research into gymnasts' experiences. Therefore, this research not only contributes to the sociological literature on pain and injury, but also provides a complimentary addition to the efforts towards injury prevention from the medical, epidemiological and psychological perspectives. A poststructural, Foucauldian theoretical framework underpins this study, which makes overt use of Foucault's work on discourses, techniques of power and technologies of the self. Data were generated through semi-structured interviews with seven former elite female artistic gymnasts, who were asked to reflect on their experiences with pain and injury. By analysing participants' talk through poststructural discourse analysis, three main discourses were evident. Firstly, participants' persistence through pain and injury was due to the desire to compete. Secondly, participants were able to differentiate between "good pain" and "bad pain". Thirdly, participants had a higher tolerance for pain than for injury. Participants engaged with these discourses in multiple and sometimes conflicting ways. Ultimately however, these discourses were normalised through a combination of disciplinary techniques and technologies of the self. Therefore, this research raises serious questions about the ways in which gymnasts may develop an uncritical acceptance of the 'truths' surrounding pain and injury.

Declaration

I confirm that this work has not been submitted for any other degree or examination. I have read and understood the University's regulations on plagiarism and I declare this as my own original work.

Signed: _____

Date: _____

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1.0 Chapter One – Introduction

1.1 Introduction

This research investigates the discourses that were influential in former elite female artistic gymnasts' experiences with pain and injury. Women's artistic gymnastics (WAG), like many other sports, has undergone a process of change since its establishment as an Olympic sport in 1952 (Hall, A., 2011). According to Barker-Ruchti (2009, p. 47) gymnastics was once characterised by "graceful and ballet-type routines", but since the 1950s, it has become increasingly acrobatic. The rivalries amongst the Eastern Bloc nations increased the innovative nature of gymnastics, ultimately leading to an increase in the difficulty of routines. This rise in difficulty inevitably led to an increase in the risk accepted by gymnasts and coaches, heightening the potential for injury (Benn & Benn, 2004). In order to keep up with this change, "gymnastics equipment has been continuously updated and refined by added padding, increased mat thickness, foam pit landing areas, spotting belts and so forth" (Sands, 2000, p. 360). This has further increased the risk taken by gymnasts, and thus, the chance of injury (Benn & Benn, 2004).

While the sociological literature relating to pain and injury has thus far provided a thorough account of the practices involved in elite level sport, there is little research specifically on understanding gymnasts' experiences. The existing research into the effects of pain and injury in gymnastics from medical, epidemiological and psychological perspectives has focussed mainly on the management of pain, and treatment of injury. As prevention of injury is considered to be more economical than treatment (Sands, 2000), an understanding of what causes gymnasts to engage with training through pain

and injury is necessary to inform prevention procedures. Sociological research addressing these behaviours can serve as a starting point to gaining this understanding.

The primary research question of this study was:

(1) What discourses have been influential in former gymnasts' experiences with pain and injury?

In order to investigate this question, two sub-questions were used:

- (1) How did former gymnasts engage with the discourses of pain and injury?
- (2) Through what discursive practices and disciplinary techniques did the discourses of pain and injury become dominant?

1.2 Significance of the research

Despite extensive sociological research into athletes' pain and injury experiences, very little has focused explicitly on gymnasts. This study will not only contribute to filling the gap in the sociological literature, but also provide an enlightening and complimentary addition to the research on gymnasts' pain and injury from medical, epidemiological and psychological perspectives. According to Hargreaves and Vertinsky (2007, p. 20) "we can only understand the body as being multi-dimensional, constantly produced, [and] in process." Therefore, this research will connect a behavioural understanding of pain and injury, to the physiological and psychological understanding. It will highlight potential dangers and consequences of adopting discourses of pain and injury, thus allowing for a greater understanding of the workings of these discourses. In doing so, I seek

to contribute to efforts directed at preventing injuries in gymnastics (Sands, 2000).

When the increasing body of medical, epidemiological and psychological research is considered in Chapter Two, it appears important to interrogate the discourses of pain and injury in gymnastics from a sociological perspective, in order to contribute to injury prevention. Since gymnastics has been recognised as a high-risk sport within the medical, epidemiological and psychological perspectives, it seems appropriate to problematise the practices of elite level gymnastics and the lasting effects of the extreme pressures gymnasts are placed under from a young age. Furthermore, if we compare the destructive implications of training through pain and injury to other problematic areas associated with gymnastics, for example, eating disorders (Johns & Johns, 2000), then the argument for research into pain and injury experiences in gymnastics would appear valid.

This research also contributes to the field of pain and injury research by adopting a poststructural perspective, informed by the work of Michel Foucault. According to Rail and Harvey (1995) the Foucauldian approach allows the positioning of the body at the centre of research. Given the centrality of the body in pain and injury experiences, Foucauldian explanations could “reveal the unwritten norms that promote the acceptance of pain and injury” (Bridel, 2010, p. 63). Foucauldian concepts can help to further an understanding of pain and injury by calling into question the taken-for-granted assumption that pain and injury are necessary for sporting success. Here I agree with Nemeth (2005) who argued that an appreciation of individual differences in understanding pain might contribute to prevention of injury.

1.3 The researcher's position

Since this research adopts a poststructural stance, it is important to acknowledge the relevance of the researcher's (my) identity (Taylor, 2001). According to Taylor (2001), a reflexive discourse analyst would reject the possibility of neutrality within their research, arguing that detachment is impossible. Therefore, I provide a brief description of my identity as it relates to this research, in order for me (and the reader) to interrogate how my biases and subjectivities will have influenced the data generation and analysis (McEvilly, 2012).

I was involved in elite gymnastics between the ages of six and eleven. At the age of eleven, I suffered an injury,¹ which forced me to take a break from gymnastics of over two years to undergo surgery and recovery. After realising the possible risks associated with elite level training, it was decided, by myself and my parents, that I would not carry on with this level of training. The effects of the discourses of pain and injury are ones I have experienced and witnessed in my own gymnastics training, which has influenced my choice to research pain and injury. If I had not been involved with elite gymnastics my approach to researching pain and injury may have been different, and I may have had different assumptions and interpretations of the interview data.

After revisiting poststructuralism during the early stages of my MSc degree, I realised that I had, somewhat unknowingly, engaged with poststructuralism during my undergraduate dissertation. My beliefs align with the fundamental poststructural assumption that people and practices should never be seen in

¹ In 2001 I suffered an injury to my left arm whilst on the uneven bars, including several fractures and a dislocated shoulder.

isolation, but in the context in which they operate (Macdonald, Kirk, Metzler, Nilges, Schempp, & Wright, 2002). Furthermore, this perspective supports my contention that previous findings on the reasons for the acceptance of pain and injury should not automatically be applied to all sports. By taking a poststructural position, my research is committed to the rejection of a 'one size fits all' explanation of pain and injury; rather, it focuses on a context-specific understanding of the workings of discourse in gymnastics.

1.4 Reading the thesis

Chapter Two examines the current literature on pain and injury by firstly exploring the medical, epidemiological and psychological research into gymnastics, and secondly the sociological research into pain and injury in sport in general. Chapter Three discusses the theoretical underpinnings of this research. Particular attention is given to Michel Foucault's work on discourse, technologies of power, and technologies of the self. Chapter Four outlines the methodology of the study, detailing the steps taken to carry out the research, including participant selection, data generation, and data analysis. In Chapter Five, I present the findings of this research. This chapter is split into three sections, each section analysing a discourse evident within the interview data. The final chapter is devoted to drawing conclusions from the findings presented in Chapter Five. Here I reach a final conclusion based on the research questions, discuss the limitations and suggest recommendations for future research.

2.0 Chapter Two – Literature Review

2.1 Introduction

This chapter examines the current literature on pain and injury. Firstly, this chapter will identify pain and injury in gymnastics as a problem of sociological interest by exploring the research into pain and injury from the medical, epidemiological and psychological perspectives. Secondly, as research relating explicitly to pain and injury in gymnastics from a sociological perspective is limited, this chapter examines the sociological literature covering pain and injury more broadly. This section will start with an outline of the major theories used to understand pain and injury in sport, and subsequently a report on current research investigating pain and injury in various sports. Finally, research studying the training experiences of gymnasts will be considered, with an explanation as to how the current study can develop a better understanding of gymnasts' engagement with pain and injury.

2.2 Pain and injury as a research problem in gymnastics

Recently there has been a rise in public and academic interest in women's artistic gymnastics, which has developed along with the growth of the sport's popularity (Dowdell, 2011). This interest has included concern over the practices involved in training young girls (Ryan, 1995). Elite gymnasts start their careers as early as five years old (Zetaruk, 2000) and because female gymnasts reach their gymnastics peak at a young age, they often train for twenty to thirty hours a week (Cogan, 2006). Training loads of this magnitude, while performing skills of extraordinary difficulty, put the growing body under tremendous physical and psychological stress, which is a "natural recipe for

injury” (Sands, 2000, p. 360). The effects of this intense training have been thoroughly researched from medical, epidemiological and psychological perspectives. Before examining the literature on pain and injury in gymnastics, it is important to define pain and injury, differentiating them from one another.

Here I utilise this definition:

Injury can be understood as a breakdown in the structure of the body, a breakdown that may affect its function. Pain is the marker of an injury and is an unpleasant sensory and emotional experience associated with actual or potential tissue and skeletal damage.

(Howe, 2004, p. 74)

According to this definition, the key differentiation between pain and injury is the presence or absence of damage to the body. Additionally, this definition depicts pain as an indicator, or warning signal for the prevention of injury. Bale (2006) recognised that athletes often experience pain that is unrelated to injury, including emotional pain and exhaustion. However, very little sociological research has recognised the multiple types of pain experienced by athletes.

2.2.1 Medical and epidemiological perspectives

At the forefront of the medical and epidemiological research into pain and injury in gymnastics is William A. Sands, who argued that injury is the most serious problem faced by gymnasts (Sands, 2000). Research has focused on injury identification and screening (Sands, McNeal, & Stone, 2011), and assessing how realistic the possibility of injury prevention is in gymnastics (Sands, 2000). Sands (2000) concluded that it was only possible through a multifaceted approach by targeting training loads, rules and regulations, equipment and facilities, and training aids. Additionally, Bradshaw and Hume (2012)

investigated the effectiveness of injury prevention methods based on biomedical analysis. It can be argued, therefore, that the main focus from this perspective has been injury prevention and management, rather than understanding how gymnasts engage with pain and injury.

Although this perspective fails to provide explanations as to why gymnasts get injured, and pays relatively little attention to pain in gymnastics, it has established and identified gymnastics as a high-risk sport. Furthermore, Daly, Bass and Finch (2001), while coming from a medical background, called for an investigation into attitudes, knowledge, and behaviour in relation to injury. A behavioural understanding can be delivered by a sociological investigation, which may provide an insight into the process of injury attainment, illuminating other possible avenues of investigation into the prevention of injury in gymnastics.

2.2.2 Psychological perspective

Considerable research has been done from a psychological perspective on sport-related pain, with some research into pain experienced in gymnastics (Nemeth, 1998; Nemeth et al., 2005). The emphasis of the psychological perspective has been to understand the management of pain, with very little research into injury (Calmels, d'Arripe-Longueville, Fournier, & Soulard, 2003). Highlighting the fact that gymnasts may use coping strategies for pain suggests that pain in gymnastics is a research problem that needs to be addressed.

The importance of defining and understanding the differences between pain and injury was emphasised by Nemeth (1998) and Nemeth et al. (2005) who investigated young gymnasts' understanding of pain. The authors found that at the ages of three and four, the participants' perceived pain to be a negative

concept, whereas at the ages of six and seven, they could tell the difference between pain owing to exertion, and pain that was likely to lead to injury. The authors defined this first type of pain as pain that was perceived by the participants to be beneficial towards their training. Therefore, Nemeth et al. (2005) concluded that the gymnasts underwent a process of normalisation. In her doctoral thesis Nemeth (1998) suggested eight possible factors that might increase an athlete's tolerance for pain:

(a) having less fear of the pain due to their experience with pain; (b) their spontaneous use of coping strategies, which may be a learned behaviour; (c) the presence of a norm for pain tolerance; (d) the desire to demonstrate socially accepted behaviour; (e) their desire to improve their skill or level of conditioning; (f) their motivation to win; (g) pressure from coaches, peers and parents; (h) wanting to hide weaknesses from opponents.

(Nemeth, 1998, p. 13)

Despite these suggestions, no attempt was made to understand how pain became normalised. Therefore, I agree with Nemeth et al. (2005), who argued that it is important that research is carried out into what information is being provided to young gymnasts by coaches and parents regarding the implications of training through pain. This information may aid understanding in relation to how gymnasts internalise and normalise pain.

2.3 Pain and injury from a sociological perspective

The literature on pain and injury in gymnastics from a sociological perspective is limited. Therefore, this section comments on the literature on pain and injury

pertaining to other sports. Since its rapid development dating back to the early 1990s, the sociological investigation into pain and injury in sport has provided extensive exposure to the ways in which athletes experience pain and injury. A number of contributions have been made to the literature on sporting pain and injury, which have been concerned with athletes' management of pain and injury, athletes' perceptions of pain and injury, and explanations of the normalisation of pain and injury. This section aims to explore the latter of these research contributions by outlining the attempts made to understand why and how athletes normalise pain and injury in sport.

2.3.1 The sport ethic

One of the major theories used to explain deviant behaviour in sport is that proposed by Hughes and Coakley (1991, p. 312), which outlined athletes' "overconformity to the sport ethic". The sport ethic refers to what sportspeople use as the criteria for defining what it means to be a "real athlete" (p. 308), and according to Hughes and Coakley (1991, p. 308), some sportspeople have an "unqualified acceptance of and unquestioned commitment" to this system of beliefs. Hughes and Coakley (1991) identified that athletes are expected to: make sacrifices for the game; strive for distinction; refuse to accept limits in the pursuit of possibilities; and accept risks and play through pain. The authors stated that conformity to these norms is often the basis for which athletes are accepted onto a sports team, causing athletes to internalise these norms as a part of their athletic identity.

Hughes and Coakley (1991) described this conformity as positive deviance. While deviance is usually defined as the rejection of, or underconformity to, certain norms, positive deviance accounts for when "athletes care too much" (p.

310) for their sport, and overconform to its values and beliefs. The authors stated that it is important therefore to understand the differing social contexts in which athletes' positive deviance is grounded, particularly when trying to control deviance in sport. Behaviour that may be deemed deviant outside of sport may be regarded as acceptable inside sport, and *vice-versa*. Nevertheless, despite expanding on the investigation of deviant behaviour by providing a more "sophisticated appreciation of the varieties of 'deviance'" (Blackshaw & Crabbe, 2004, p. 25), Hughes and Coakley have been accused by Blackshaw and Crabbe (2004) of creating an approach that is ultimately too abstract. Furthermore, they failed to provide an explanation of how athletes may come to resist conforming to the sport ethic.

2.3.2 Howard L. Nixon II

One of the most frequently published authors on pain and injury in sport is Howard L. Nixon II (Roderick, 2006b). Nixon's (1993) social network analysis focuses on what he called "sportsnets"², and how they operate to influence the choices and decisions made by athletes, by blocking appropriate alternatives. Sportsnets reinforce the values and norms of what Nixon called the 'culture of risk', which conveys the message that athletes ought to accept the risk of pain and injury, and stigmatises when athletes are displayed to be effected by pain and injury. However, in his study on the extent to which coaches embrace the culture of risk, Nixon (1994) concluded that college coaches from a mix of sports neither totally rejected nor embraced risk. Although, it must be recognised that the coaches' responses – from a questionnaire survey – should

² Sportsnets are "webs of interaction that directly or indirectly link members of social network in a particular sport or sports related setting" (Nixon, 1992, p. 128).

be analysed with caution, as coaches may have been protecting themselves from scrutiny by withholding their true beliefs about risk.

2.4 Research into pain and injury

2.4.1 Male dominated sports

The majority of the first studies investigating athletes' experiences with pain and injury focused on sports with a more pronounced and obvious display of pain and injury: male dominated team sports. This research was "grounded in a gendered analysis that saw the routinization of pain and injury as a way for men to validate their masculine and athletic identities" (Theberge, 2006, pp. 635-636). For example, Young, White and McTeer (1994) investigated how dominant notions of masculinity were reinforced by the acceptance of risk, pain and injury. Their research found that the tolerance of risk, pain and injury was a central feature of the male sports culture, and that participation in violent sports reinforced notions of masculinity amongst male athletes. Amongst the most widely cited studies into pain and injury are Howe's (2001) ethnographic study of the experiences of professional Rugby Union players, and Roderick's (2006a) research into the working lives of professional footballers. Central to Roderick's (2006a) argument is that injuries occur within, and are products of, networks or social relationships. He emphasised the interdependent power relations between managers and players, and how they influenced the decisions made regarding pain and injury. Players, for example, were judged based on their individual contributions, and injury jeopardised their contribution, ultimately causing athletes to play with injuries more often.

2.4.2 Female dominated sports

Despite the early focus of research into pain and injury being on men in sport, there is now a growing literature on women's experiences with pain and injury. It has already been mentioned that male sporting contexts provide a celebration of masculinity and male dominance. Women, on the other hand are more likely to experience a "collision of norms" (Malcom, 2006, p. 500) as the traditional feminine norms of society contradict the stereotype of masculine female athletes. For example, Charlesworth and Young (2006), from their investigation of Canadian and English female athletes, concluded that there were a number of apparent differences between men's and women's experiences with pain and injury, and indeed differences amongst women. These differences lay with women's willingness to discuss pain and injury more openly than men, while also remaining conflicted about the perceived inconsistencies between being an athlete and a woman. Young (1996) suggested that female athletes may feel inconsistent with the common constructions of femininity, meaning therefore, that sport may provide an opportunity to compensate for their perceived insufficiencies as females, and challenge gender norms (as cited in Pike & Maguire, 2003, p. 234).

A conflicting body of literature suggests that women are adopting similar norms and patterns of behaviour as male athletes (Houlihan, 2008) and are as willing as male athletes to play through pain and injury (Young & White, 1995; Charlesworth & Young, 2006; Pike & Maguire, 2003; Pike, 2004). Young and White (1995), for example, suggested that their female participants, like the male participants in their previous study, accepted pain and injury as normal. Furthermore, Charlesworth and Young (2006) argued that regardless of their gender, athletes learn to tolerate injury and normalise pain, as a result of their

socialisation into the 'culture of risk'. Thus, there is now sufficient research to include women in the dominant model of men's sport, "in which athletes' bodies are subjected to rationalised processes of intervention in the interests of performance" (Theberge, 2006, p. 636). However, despite these advances in literature relating to women's experiences with pain and injury in sport, the reasons cited for the acceptance of pain and injury remain inconsistent. Therefore, further research is needed in order to establish the influences on female athletes for accepting pain and injury as a part of their sport.

2.4.3 Amateur vs. professional

Throughout the initial literature concerning pain and injury in sport, it was assumed that the commercial and financial pressures that came with the status of professionalism influenced athletes to play through pain and injury, more so than when commercial and financial pressures were absent. Waddington, Loland and Skirstad (2006) argued that the increased competitiveness of modern sport was influenced by the growing commercialisation of sport, and thus the amplification of the social and economic significance of success. This, he argued, led to an increase in the incidence of injury. Similarly, McEwen and Young (2011, p. 153) concluded that professional ballet dancers trained in a cultural environment called the "business of risk", which facilitated the acceptance of pain and injury because the careers of the dancers were under threat, with them relying on dancing as a source of income. In contrast, Malcolm and Sheard's (2002) findings failed to indicate that the commercialisation and professionalisation of Rugby Union fostered a greater acceptance of pain and injury. However, Malcolm and Sheard (2002) emphasised the importance of investigating pain and injury as separate – albeit related – constructs, as

players were prepared to play through pain, with little or no risk of injury, but were reluctant to play where there is significant risk of injury.

The findings of these studies posed two vital questions: to what extent do amateur athletes play through pain and injury?; and, what influences amateur athletes to play through pain and injury? In response to these questions, Pike and Maguire (2003) investigated the pressures on amateur athletes to train through pain and injury, by observing amateur female rowers. The authors sought to look beyond the commercial and financial pressures of playing through pain and injury, and identify other less obvious – yet equally powerful – influences. Similar to the findings of research on male athletes (Young et al., 1994; Young & White, 1995; Young, 1993; Nixon, 1993), Pike and Maguire (2003) found that female athletes trained on injuries in order to maintain their athletic self. Ultimately, they found that “internal” pressures influenced non-elite athletes more, in the absence of “external” pressures. That is, athletes were more concerned with developing their identity as a “rower”, than any financial repercussions from being unable to perform.

Gymnastics occupies an interesting position along the spectrum between amateurism and professionalism. Although the top gymnasts in Great Britain attain the status as an elite athlete, they receive no financial reward for their success. Moreover, they receive very few sponsorship endorsements compared to other unpaid athletes. Many gymnasts and gymnastics clubs rely solely on City, Borough or County Council funding, and National Lottery funding (British Gymnastics, 2008). The rationale for studying such athletes are similar to those cited by Pike and Maguire (2003, p. 233) in examining whether the

acceptance of pain and injury “permeate[s]” into other levels of participation, where the promise of financial reward is almost entirely absent.

2.5 Children in sport

While my research does not directly address the experience of children in gymnastics, participants will be asked to reflect on their entire careers as gymnasts, which will inevitably involve discussing experiences they had when they were children. Therefore, it is important to discuss the literature on children’s experiences with pain and injury.

2.5.1 Process of internalisation

It is now widely accepted that athletes internalise pain and injury as normal in sport (Roderick, 2006b; Howe, 2001; Hughes & Coakley, 1991; Malcolm & Sheard, 2002; Nixon, 1992; Pike & Maguire, 2003; Young et al., 1994).

However, athletes do not necessarily start out with this attitude (Malcom, 2006). Indeed, Smith (1988) found that young teenagers showed less approval of pain and injury than the older teenagers in the study. Malcom (2006) produced similar findings when she investigated the socialisation process that preadolescent and adolescent female softball athletes underwent in order to internalise pain and injury. Strategies used by the participants’ coaches included downplaying and ignoring injuries, teasing and joking about pain, portraying pain as positive, and telling the athletes directly that the injury was not a concern. Although the majority of the participants accepted pain and injury eventually, a small number rejected these norms, which Malcom (2006, p. 515) termed “failed socialization”. Furthermore, she suggested that more highly skilled players were more likely to embrace the norms of accepting pain and injury than lesser skilled players.

2.5.2 Child labour and abuse

Women's artistic gymnastics is characterised as a sport for "very young girls assumed to be coached by strong authoritarian figures" (Kerr, 2014, p. 86), which has been its central criticism due to the potential for child abuse. In sport, the end often justifies the means (Heikkala, 1993) and "ultimately, all that is acknowledged in sport is the winning performances, not the methods involved in achieving them" (Gervis & Dunn, 2004, pp. 216-217). Furthermore, Pinheiro, Pimenta, Resende and Malcolm (2012) argued that success masks the distress of abuse and makes it difficult for young athletes to challenge or resist their coaches. Indeed, given the length of time athletes spend with their coaches, the relationship between them may be as significant for athletes as the parent-child relationship, causing young athletes to place a significant amount of trust in their coach (Gervis & Dunn, 2004). According to Pinheiro et al. (2012), this makes it difficult for athletes to examine personal experiences in a detached manner. For this reason, I chose to interview former gymnasts, in the hope that they would have been able to critically reflect on their gymnastics experiences since their retirement.

2.5.3 Child abuse policy and regulation

Despite the increased awareness of sexual and physical abuse in sport, "coaching in the UK is largely unregulated" (Gervis, 2009, p. 84). Although national governing bodies in the United Kingdom have implemented child protection policies, there is still a gap between policy and practice. For example, the Safeguarding and Protecting Children Policy published by British Gymnastics highlights that physical abuse can be categorised as:

- 1) Provision of performance enhancing drugs or encouragement to take other medication to enhance performance.
- 2) Setting a training regime that exceeds the capacity of the child's immature and growing body.
- 3) Inflicting pain on a child that is beyond an acceptable level of discomfort involved in physical preparation and training.
- 4) Forcing a child into a highly restricted and unhealthy diet that may lead to extreme weight loss.
- 5) Physically pushing, poking, or prodding a child.

(British Gymnastics, 2012, p. 11)

When examined closely, there is the potential for subjectivity surrounding points two and three, resulting in the potential for child abuse to go unnoticed. For example, there are no clear guidelines as to how intense a training regime must be to exceed the capacity of the child's growth. Furthermore, there are no clear guidelines as to what is an acceptable level of discomfort that a child is allowed to be in. Highlighting possible examples of abuse within gymnastics may help to act as a catalyst for change in child protection policy.

2.6 Sociological study of gymnastics

According to Young et al. (1994, p. 178) nonviolent sports are considered to be replete with "softer" masculinity, making them typically less valued. Sports such as gymnastics are often devalued due to their aesthetic components, which connote feminine characteristics (Young et al., 1994). However, this perception would appear inconsistent given the strength requirements of gymnastics. Moreover, Ryan (1995) argued that young gymnasts perform magnificent feats of physical strength and agility, which are concealed by the aesthetic

requirements of the sport. Thus, gymnasts' capabilities, and therefore the potential for risk, are rarely acknowledged in the academic literature. It is, therefore, an aim of this study to illuminate the experiences of gymnasts in the pursuit of excellence, and to highlight the extreme measures taken to achieve their goals.

2.6.1 Training experiences in women's artistic gymnastics

As previously noted, research relating explicitly to pain and injury in gymnastics from a sociological perspective is limited. Nevertheless, there is a small collection of research on gymnastics focusing in part on pain and injury amongst other training experiences. Barker-Ruchti (2008) used Foucauldian concepts to explain how gymnasts become inscribed and normalised by particular dominant standards. She argued that gymnasts accept prevailing norms, such as training through pain and injury, because they have been disciplined into believing that these norms are "truthful" (p. 379). Barker-Ruchti and Tinning (2010) affirmed these findings when they investigated the training experiences of elite gymnasts aged between ten and fifteen years old. They argued that the degree of discipline from coaches was key in preventing athletes from reflecting upon themselves and potentially resisting the dominant norms. This, in turn, made them engage unquestioningly in destructive behaviours, such as disordered eating and persistence through pain and injury. They further argued that the elite gymnasts in their study came to embody "submissiveness and dependence" (p. 245), turning them into docile bodies.³ Furthermore, participants appeared to have "minimal resources for resistance or self-determination" (p. 233).

³ "A body is docile that may be subjected, used, transformed and improved" (Foucault, 1977, p. 136).

Johns and Johns (2000) examined the power struggles that shaped discursive practices⁴ amongst gymnasts, focusing specifically on the use of self-monitoring or ‘technologies of the self’ to discipline their own eating practices. The authors argued that a gymnast who is successful in managing her weight according to the norms of gymnastics “applies a technology of the self through inscriptions of docility” (p. 226). The gymnasts in their study were constantly under surveillance, which caused them to internalise this gaze, and self regulate themselves into compliant athletes. Although Johns and Johns (2000) applied Foucault’s technologies of the self, they were unable to identify examples where their participants had resisted the dominance and authority of coaches.

2.7 Summary

There is enough research to speculate the possibility of a culture unique to sport that deeply embeds certain norms, fostering the acceptance of pain and injury. However, not all athletes choose to do so. There must be an additional or alternative factor that influences the internalisation process. As well as a ‘culture of risk’, the literature has indicated that the coach may play an integral role in the normalisation of pain and injury practices, which may sometimes be perceived as abuse, particularly with regards to children in sport. The discourses evident amongst the current literature indicate the tendency for athletes to internalise pain and injury, despite the associated risks. My research will investigate the factors influencing the internalisation of pain and injury in gymnastics, while also seeking to understand the pain and injury discourses that gymnasts engage with.

⁴ Discursive practice is the process by which knowledge is formed and produced (Hook, 2001).

The physiological research into injury in gymnastics has firmly established gymnastics' status as a high-risk sport, while the fact that psychological research into pain in gymnastics focuses on pain management techniques reveals pain in gymnastics as a problem. Each perspective, while making valuable contributions to the understanding of pain and injury in gymnastics, calls for an understanding of the attitudes, knowledge and behaviours relating to pain and injury, which can be provided through a sociological investigation. Furthermore, Foucauldian concepts have been very influential on research into training experiences in gymnastics, allowing the authors to explain various practices in terms of power discrepancies, spatial distribution and surveillance. My study, by focusing on former gymnasts' experiences of pain and injury, aims to build on and expand upon this small body of research. The way in which my research will utilise Foucauldian theory is discussed in Chapter Three.

3.0 Chapter Three - Foucault

3.1 Introduction

“Michel Foucault is one of the most influential scholars of his time” (Markula & Pringle, 2006, p. ix). Despite not explicitly addressing sport in his work, Foucault “greatly impacted” the sociology of sport (Rail & Harvey, 1995, p. 164). This is because the Foucauldian approach positions the body at the centre of research questions investigating the workings of discourse, knowledge and power (Rail & Harvey, 1995). This chapter discusses the poststructural, Foucauldian theoretical framework that underpins this research study. This chapter will firstly discuss poststructuralism, followed by an understanding of the term discourse. Subsequently, this chapter examines Foucault’s conceptualisation of power, particularly his work on techniques of power, and technologies of the self.

3.2 Poststructuralism

The terms ‘postmodernism’ and ‘poststructuralism’ are often used interchangeably (Wright, 2006; Macdonald et al., 2002). According to Agger (1991) there is substantial overlap between them, insofar as their epistemological stance runs counter to that of positivist and post-positivist approaches, interrogating taken for granted assumptions (Allred & Burman, 2005). Despite being claimed by both poststructuralist and postmodernist camps (Agger, 1991), Foucault’s work is most frequently considered a “key poststructuralist text” (Wright, 2006, p. 59). Aligning with Foucault’s interest in discourses, poststructuralist researchers are interested in how data construct a particular reality, and the discursive resources drawn upon when constituting oneself (Macdonald et al., 2002). The poststructuralist perspective asserts that

knowledge is socially constructed (Wright, 2004), by rejecting the notion of 'truth'. As such, knowledge and its construction is context-specific and value-laden, meaning that there is no "absolute knowledge or absolute truth" waiting to be discovered (Dahlberg, Moss, & Pence, 2007, p. 23).

3.3 Discourse

Foucault was concerned with "the production of knowledge and meaning through discourse" (Hall, S., 2001, p. 79). Foucault (1972) defined discourse as "the general domain of all statements... a regulated practice that accounts for a certain number of statements" (p. 90). Yet, statements do not entirely encompass discourse. Therefore, it is the latter part of this definition that is more useful: the notion that discourse is a 'practice', that is, discourse always functions in relation to power (Burrows, 1999). Foucault was interested in the set of structures and rules that constituted a discourse, rather than the statements alone (Mills, 2003). Foucault (1972) described discourses as not simply groups of signs or manifestations of thinking, but "as practices that systematically form the object of which they speak." (p. 54) Indeed, he studied discourse as a "system of representation" (Hall, A., 2001, p. 72), but he was more interested in the frameworks of meaning produced in language (Allred & Burman, 2005). Therefore, it is important to recognise that discourse is not the equivalent of language; discourse does not simply translate reality into language, but structures the way one perceives reality (Mills, 2003). This does not mean, however, that 'statements' should be ignored, or their importance overlooked. In his attempt to clarify the term 'discourse', Foucault considered statements to be the "building blocks of discourses" (Markula & Pringle, 2006, p. 29).

The relationship between knowledge and power is captured in the term discourse, whereby knowledge is socially constructed by the effects of power, and then spoken in terms of 'truths' (Carabine, 2001). Power, therefore, is important in the construction and constitution of knowledge. Discourse is often referred to as a system of beliefs and values that produces particular social practices and relations (Wright, 2006; Macdonald et al., 2002). Discourse provides a means of understanding what resources are available to individuals as they make sense of their reality (Wright, 2004); however, it must be understood that the acceptance of a particular discourse is limited to those we perceive to be available to us (Sumsion, 2008). As such, discourse should be seen as something that constrains our perceptions (Mills, 2003). In this sense, it is through discourse that meanings are formed; thus, an analysis of the workings of discourse serves to capture the regularities of meaning through language (Wright, 2006). As this research is informed by Foucauldian theory, discourse analysis must examine, not just language, but also the social context and power relations "within which power and knowledge occur and are distributed" (Carabine, 2001, p. 275).

3.4 Power

A Foucauldian understanding of power is often difficult to isolate, not least because Foucault himself tended to describe power with some ambiguity, often leading to misunderstandings. For example, McLaren (2002) described how Foucault argued that power is intentional, yet it is nonsubjective (not possessed by anyone). Lynch (2011) proposed that it was more beneficial to first examine how not to understand power, that is, in the sense of sovereignty, law, and domination. Power cannot be acquired, held or possessed by people, nor does

it function solely from the top-down; rather, it operates in top-down, bottom-up, and lateral configurations (Webb & Macdonald, 2007; Burrows, 1999). Foucault described power as an interactive network of shifting and changing relations (Taylor, 2011), which form a “capillary-like network” (Markula & Pringle, 2006, p. 36), “immanent in the sphere in which they operate” (Foucault, 1998, p. 92). This suggests that power is omnipresent; power can be found in all social interactions (Lynch, 2011). Furthermore, Foucault asserted that power is not always repressive and controlling, but can be productive and positive (Burrows, 1999).

3.4.1 Disciplinary power

Despite the involvement of institutions (governments), Foucault’s analysis, in contrast to Marx’s analysis of power, extended beyond the focus of the state. During what Foucault (1977, p. 32) referred to as the “classical age”⁵, one of the privileges of sovereign power was the right to decide life and death: to take life, or let live. Since then, “the West has undergone a very profound transformation of these mechanisms of power” (Foucault, 1998, p. 136). In moving away from sovereign repressive power, having the primary existence of a central point (the state or the sovereign) (Foucault, 1998), Foucault noted the development of a modern form of power, around which the organisation of power over life is deployed: disciplinary power.

Disciplinary power centred on the body as a machine, using discipline as the tool for the domination of bodies (Rail & Harvey, 1995). According to Foucault (1977), one is capable of having a hold over others’ bodies, so that they operate

⁵ The classical age was considered by Foucault to have occurred towards the end of the sixteenth and the seventeenth and eighteenth centuries (Barchilon, 1988).

as one wishes, with the techniques, speed, and efficiency that one determines, thus producing disciplined, 'docile' bodies. Power in this sense is channelled through institutions that influence individuals in systematic ways (Wright, 2006). Rather than repression in order to control, disciplinary power represents techniques of internalised norms (Rail & Harvey, 1995).

3.4.2 Techniques of power

I drew on Foucault's work surrounding the techniques of power (1977; 1998) in order to investigate which discursive practices and disciplinary techniques caused particular discourses to become dominant. Foucault (1977) stated that disciplinary control and regulation emerged from the modern institutions, such as prisons, schools and hospitals. Much like his analysis of the prison in *Discipline and Punish* (1977), Foucault's theory has been utilised in the analysis of pedagogy (Atencio, 2006; Burrows, 1999; McEvilly, 2012; O'Flynn, 2004). Following the work of Gore (1995; 2002), this research seeks to investigate whether the micro-practices of power that Foucault elaborated in prisons, and that Gore elaborated in pedagogy, are applicable to gymnastics practice. Furthermore, it is the aim of this study to examine whether gymnastics can be seen as working in the same way as the prison or school, by "producing docile bodies through a system of internalized surveillance" (Chapman, 1997, p. 206).

Foucault was concerned with how knowledge was put to work through discursive practices in specific institutional settings to regulate the conduct of others. He focused on the relationship between knowledge and power, and how power operated through techniques (Hall, A., 2001). Based on readings of Foucault's work on the "micro-functioning of power relations", Gore (1995, p.

166) outlined eight techniques of power, which are outlined and defined as follows:

- *Surveillance* – “supervising, closely observing, watching, threatening to watch or expecting to be watched” (p. 169)
- *Normalisation* – “invoking, requiring, setting or conforming to a standard – defining the normal” (p. 171)
- *Exclusion* – “the reverse side of normalisation - the defining of the pathological” (p. 173)
- *Classification* – “differentiating groups or individuals from one another, classifying them, classifying oneself” (p. 174)
- *Distribution* – “arranging, isolating, separating, ranking” (p. 176)
- *Individualisation* – “giving individual character to oneself or another” (p. 178)
- *Totalisation* – “the specification of collectivities, giving collective character” (p. 179)
- *Regulation* – “controlling by rule, subject to restrictions, invoking a rule, including sanction, reward, punishment” (p. 180)

I utilised Gore’s (1995) framework to investigate how techniques of power were exercised in the process of disciplinary control within the gymnastics setting, and detail how this influenced the construction and normalisation of discourses of pain and injury. Foucault was interested in not just the content of discourse (McEvilly, 2012), but how knowledge was “put to work through discursive practices” (Hall, A., 2001, p. 75). Therefore, the aim of this research was to not simply identify the dominant discourses of pain and injury, but to examine how they were used, and to what effect.

3.4.3 Technologies of the self

This chapter has thus far demonstrated that the techniques of power can discipline individuals into becoming docile bodies (Markula, 2004). However, Foucault never suggested that disciplinary power was the only, or even the most important, form of power (Markula & Pringle, 2006). In his later work, Foucault was interested in the “individual’s role in changing dominant discourses” (Markula, 2003, p. 88) through what he labelled the technologies of the self. The most frequently cited definition of the technologies of the self stated that they

permit individuals to effect by their own means, or with the help of others, a certain number of operations on their own bodies and souls, thoughts, conduct, and way of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality.

(Foucault, 2000, p. 225)

Technologies of the self, therefore, serve to enable individuals to consciously transform themselves by countering dominant discourses (Jones & Aitchison, 2007). According to Thorpe (2008), critical awareness⁶ is central to this process, in particular the way in which people learn to problematise discourses. That is, only critical awareness can result in a change to one’s condition (Markula, 2004). For example, at the young age at which athletes start their training, they may be more likely to accept the discourses with which they are presented because of a “hierarchical generational order” (Gawlicz, 2009, p. 193) in which adults constitute themselves as dominant “by virtue of their age,

⁶ Critical awareness refers to an individual’s ability to question the limitations of one’s freedom, rather than simply coping with one’s situation (Markula, 2004).

social position, and knowledge or experience” (p. 211). However, as the athletes get older, more knowledgeable and more experienced, they may problematise current practices and question these dominant discourses, resisting them, and the practices they produce. For Foucault, both technologies of domination and technologies of the self produce effects that constitute the self (Besley, 2005). Foucault’s “technologies of the self” may become a relevant tool of analysis in this study when investigating the participants’ current perceptions of pain and injury. I envisage that participants will have had enough time away from gymnastics – being retired from the sport – which may have given them the opportunity to develop a critical awareness of their pain and injury experiences.

3.5 Summary

This chapter has specified the poststructural, Foucauldian theoretical framework that underpins this study. It has highlighted Foucault’s key theories and concepts, including discourses, techniques of power and technologies of the self, which this thesis engages with in order to understand the gymnasts’ experiences with pain and injury. By using such theories and concepts this research is dedicated to understanding both the restrictive potential of discourses, and the individual’s potential to resist them. Therefore, techniques of power, as outlined by Gore (1995), and technologies of the self serve as fundamental elements of the analysis. Chapter Four outlines the specific methodological process undertaken in order to achieve the aims of this study.

4.0 Chapter Four – Methodology

4.1 Introduction

This chapter outlines the processes involved in conducting this research. It discusses the selection and recruitment of participants, the methods chosen for the generation of data, and the steps taken to analyse the data. The aims of the study were threefold; it aimed to investigate, firstly, the discourses of pain and injury in gymnastics, secondly, the way in which the participants engaged with these discourses, and thirdly, what caused these discourses to become dominant. These aims served to inform the research questions, which consisted of one overarching question, and two sub-questions.

4.2 Research questions

The primary research question of this study was:

(1) What discourses have been influential in former gymnasts' experiences with pain and injury?

In order to investigate this question, two subset questions were used:

- (1) How did former gymnasts engage with the discourses of pain and injury?
- (2) Through what discursive practices and disciplinary techniques did the discourses of pain and injury become dominant?

4.3 Research design

This study applied a cross-sectional design, as it focussed on more than one case at a single point in time. As this research does not claim to be capturing truths, but is concerned with how the participants' constructed their realities

(Wright, 2004), this research employed a qualitative strategy, viewing the world through the eyes of the people being studied (Bryman, 2012). The method utilised was semi-structured interviewing. According to Arksey and Knight (1999), semi-structured interviews are a less formal approach than structured interviews, and consist of a set of questions that allow some degree of comparability between respondents, but also allow interviewers to explore meanings further. Bryman (2012) described the advantages of conducting semi-structured interviews, as opposed to unstructured or structured, which included the interest in the interviewee's point of view, and the encouragement of "ramblings' or going off on tangents" (Bryman, 2012, p. 470). Furthermore, semi-structured interviewing allows the researcher to depart from the interview guide, asking new or follow up questions based on the interviewee's response. While Nixon (1994) provided a structured form of investigating the normalisation of pain and injury with his Risk, Pain and Injury Questionnaire, it is my view that this is not a structured and orderly issue to investigate as pain and injury are not always collaborative, nor are they always mutually exclusive. Therefore, I conducted semi-structured interviews in order to encourage participants to speak freely on the subject, revealing any unforeseen information, while also providing the opportunity to ask "probing", "specifying" and "follow-up" questions to gain further information (Bryman, 2012, pp. 476-478).

The interviews were conducted using an interview guide (see Appendix A), made up of a number of specific, open-ended questions based on pain and injury. An interview guide was constructed to encourage a more active discussion on the topics of pain and injury, whilst making sure that the same questions were presented to each participant in a similar way (Moisander, Valtonen, & Hirsto, 2009). Each interview started with closed-ended

‘demographic’ questions, and an introductory open-ended question on how the participants started gymnastics. Although these questions were not directly linked to the research topic, they were included to provide some contextual information and to ease the participants into the interview, in order to relax them. The majority of the questions were designed to allow for a series of follow up questions on the basis of initial responses to enable the interviewee to expand on their answer (Wengraf, 2001). Participants were given the choice of completing their interviews over the telephone, over a video-calling platform (FaceTime or Skype), or face-to-face. Each participant opted to complete the interview over the telephone, except for Lauren, who completed hers over FaceTime.

4.4 Participants

This research aimed to develop the understanding of pain and injury in elite gymnastics, rather than generalise the findings to a large population. Therefore, I employed a purposive method, guided by a criterion sampling strategy.

Teddlie (2007) defined purposive sampling as selecting individuals or groups based on specific purposes associated with answering the research questions. Criterion sampling, a sub-category of purposive sampling, seeks to recruit participants based on their ability to meet predetermined criteria (Patton, 1990).

4.4.1 Participant characteristics

This research investigates the pain and injury discourses in a very specific sample group; therefore, participants were chosen based on a set of criteria. The sample comprised of retired elite-level female artistic gymnasts from the United Kingdom. Retired gymnasts were chosen instead of current gymnasts in the hope that the time away from competitive gymnastics would have given

them the opportunity to reflect on their pain and injury experiences. It was also hoped that by having had some time away from competitive gymnastics, the former gymnasts would be able to give more detached, and possibly critical, accounts of their pain and injury experiences, especially if their retirement had been as a consequence of sudden or prolonged pain and injury.

The reasons behind choosing elite gymnasts relates to the findings discussed in Chapter Two with regards to the existing literature. Elite gymnasts occupy an interesting position within sport, as they are at the top of their sport, yet they do not receive any financial reward for their success, unlike professional athletes. Therefore, commercial and financial pressures are not a prominent feature of gymnastics, suggesting that there must be alternative pressures on gymnasts to persist through pain and injury. The criteria used for defining the gymnasts as 'elite' were whether they competed nationally at the British Gymnastics Championships, or internationally for Great Britain.

Men's and women's artistic gymnastics (MAG and WAG respectively) differ considerably, not simply because they compete on different apparatus, but because of the physiological differences in their bodies, developed by the constructive characteristics of the men's and women's equipment (Arkaev & Suchilin, 2009). Furthermore, despite WAG becoming significantly more acrobatic over the past four decades, mimicking the structure of MAG, WAG has retained much of its original artistry that has never been present in MAG (Barker-Ruchti, 2009). For example, leaps and split elements remain an integral part of WAG routines, which require extensive conditioning of the body. This often forces the body into over-stretching certain limbs into painful positions.

Therefore, it would be inappropriate to research the two together, unless the purpose of the research was to provide ender comparison, which it is not.

The age range of the sample was between eighteen and twenty-six years old. According to Arkaev and Suchilin (2009) it takes approximately eight to ten years to reach the top level of gymnastics, with the peak of performance occurring during the pre-puberty period. Therefore, a gymnast's career is relatively short compared to athletes in other sports, whose physical attributes do not decline after sexual maturation. With the retirement age for female gymnasts being during the stages of early or late adolescence (Kerr & Dacyshyn, 2008), it was important to target gymnasts who had recently retired at this young age, so that they could more accurately recall their experiences with pain and injury, while still having had enough time to reflect. Table 1 displays information on the seven participants, including details of their retirement:

Table 1 - Participant details

Participant	Age	Level	Retirement Age	Reason for Retirement
Sarah	20	International Elite	19	<ul style="list-style-type: none"> ▪ Injury (specific) ▪ Injury (accumulation) ▪ Fulfilled goals ▪ Loss of enjoyment
Lauren	23	International Elite	20	<ul style="list-style-type: none"> ▪ Injury (specific) ▪ Injury (accumulation) ▪ Other – started a new sport
Louise	18	National Elite	17	<ul style="list-style-type: none"> ▪ Injury (specific)
Anna	20	International Elite	19	<ul style="list-style-type: none"> ▪ Injury (specific) ▪ Lost interest
Grace	20	International Elite	19	<ul style="list-style-type: none"> ▪ Injury (accumulation) ▪ Other – university commitments
Katie	19	National Elite	15	<ul style="list-style-type: none"> ▪ Injury (specific) ▪ Injury (accumulation)

				<ul style="list-style-type: none"> ▪ Lost Interest
Ellie	26	International Elite	20	<ul style="list-style-type: none"> ▪ Injury (accumulation) ▪ Fulfilled Goals ▪ Other – not selected for major competition

4.4.2 Participant selection

An initial list of potential participants was developed, based on the aforementioned criteria and information gathered from the British Gymnastics website. Subsequently, an acquaintance, and former elite gymnast, provided the email addresses of three of the participants, while also making herself available for interview. An additional participant's details were obtained from one of these initial participants, meaning that a snowball sampling⁷ technique was also utilised. The remaining participants were contacted directly using email addresses obtained through social networking websites. This provided a total of seven participants, who each participated in an individual interview. According to Taylor (2001) analysis of qualitative discourse data is relatively inefficient and labour-intensive, and is often difficult to put into a succinct form. Therefore, research of this nature is likely to use a smaller sample than studies adopting a positivist stance in order to more easily manage the large volumes of data. Furthermore, participants belonged to a particular limited category of society (retired, elite-level, British, female artistic gymnasts), limiting the number of potential participants who could be recruited.

In order for this research to be carried out, it was necessary to submit an application for ethical approval to the Faculty of Life Sciences Research Ethics Committee. Upon ethical approval (see Appendix B), participants were

⁷ Snowball sampling occurs when the researcher makes initial contact with a small group of participants, and then establishes contact with other potential participants through them (Bryman, 2012).

contacted and given a Participant Information Sheet (see Appendix C).

Additionally, it was emphasised to participants before the interviews commenced that anything that they said would be kept confidential, and that their names and any information making them identifiable within the data would be changed. For example, all participants were given pseudonyms.

Furthermore, participants were asked to provide verbal consent before participating in the interview, and also to sign an informed consent form (see Appendix D). As the interviews were not done face-to-face, consent forms were sent to participants in the post with stamped, addressed envelopes.

4.5 Data generation and analysis

4.5.1 The interview process

Interviews were recorded using two separate Dictaphones, and the computer based recording program Audacity. They were immediately transcribed using Microsoft Word, in order to advise and make any adjustments to subsequent interviews. As described in Chapter Three, a poststructural Foucauldian theoretical framework, drawing in particular from Foucault's work on discourse, techniques of power, and technologies of the self, informed the analysis. Gore's (1995) techniques of power were used as part of the poststructural discourse analysis, alongside Foucault's (1990) technologies of the self, in order to investigate the workings of pain and injury discourses.

4.5.2 Discourse analysis

It is important to emphasise that the aim of this research was not to replace the uncertain or unknown with truth. As Cheek (2004) suggested, once truth and certainty is inferred in qualitative research, we are in danger of oversimplification; therefore, it is important to appreciate the complex nature of

both discourse and discourse analysis. Chapter Three highlighted the complexity of even defining the term discourse. Not surprisingly, the definition of the term reflects its theoretical underpinning (Cheek, 2004), which in turn, goes on to inform the process of discourse analysis. Discourse analysis is a “broad theoretical framework” (Potter & Wetherell, 1987, p. 175) for the investigation into the workings of discourses. Given the widespread and multidisciplinary application of discourse analysis, there is no single or ‘correct’ way in which it is carried out.

The discourse analysis carried out in this research made overt use of the work of Foucault (1980), and the poststructural perspective. According to Dahlberg et al. (2007, p. 23), the poststructural perspective argues, “knowledge and its construction is always context-specific and value-laden.” Poststructural discourse analysis, therefore, asserts that people or practices should never be seen in isolation, but in the context in which they exist (Macdonald et al., 2002). As a result, poststructural theorists reject the idea of a universal truth and objective knowledge because truths are always partial, situated in terms of time and place in the context of the specific situation (MacLure, 2003; Wright, 2004). According to Scheurich (1997, p. 34) “truth is not power-free; it is power-laden”. It is here where Foucauldian concepts of power-relations adjoin with poststructuralism, for poststructuralists argue, “discourses are strongly implicated with the construction of truth” (Dahlberg et al., 2007, p. 31).

A necessary starting point was to examine language in use. According to MacLure (2003) there is no blueprint for the analysis of texts, which makes it difficult to see that which is apparently natural and unquestionable. As mentioned earlier, the discourse analyst must read the context, and not simply

categorise the pieces of speech (Potter & Wetherell, 1987). With this in mind, I followed the guidelines set out by Carabine (2001, p. 281) on undertaking a Foucauldian discourse analysis. The chosen steps were as follows:

- Know your data – read and re-read.
- Identify themes, categories and objects of the discourse.
- Look for evidence of an inter-relationship between discourses.
- Identify the discursive strategies and techniques that are employed.
- Look for absences and silences.
- Look for resistances and counter-discourses.
- Identify the effects of the discourse.
- Be aware of the limitations of the research, your data and sources.

Texts were interrogated using the research questions to investigate the unspoken and unstated assumptions, by disrupting the common-sensical and taken-for-granted (Cheek, 2004; MacLure, 2003). Firstly, dominant discourses of pain and injury were identified within the data, which was done by reading and re-reading the texts. A number of themes were identified, which were then condensed and grouped together into broad themes, and sub-themes. For example, hiding injuries, self-regulating rehabilitation programs and the coaches rejecting injury were themes that were grouped together under the main theme of ‘the logic of competing’. The broad themes made up the three overarching discourses, which became the logic of competing, differentiating between “good pain” and “bad pain”, and the increased tolerance for pain, and decreased tolerance for injury. Subsequently, the sub-questions were used to identify how participants engaged with these discourses, and how they became dominant. This was done using Gore’s (1995) techniques of power and Foucault’s (1990)

technologies of the self, in order to delve into the layers of discourse, identifying the relations of power at work in the construction of the dominant discourses of pain and injury. According to Macdonald et al. (2002) it is through discourse that meanings, subjects and subjectivities are formed; therefore discourse analysis enabled this research to gain an understanding of the meanings and subjectivities attributed to the gymnasts' experiences with pain and injury. The discourses that were evident within the data are discussed in Chapter Five.

5.0 Chapter Five – Findings/Discussion

5.1 Introduction

The focus of this research involves investigating the discourses which have been influential in former gymnasts' experiences with pain and injury. Three discourses were evident upon analysing the interview data, which all surround the acceptance of pain and injury. The discourses are:

- 1) The logic of competing
- 2) Differentiation between “good pain” and “bad pain”
- 3) Increased tolerance of pain, decreased tolerance of injury

This chapter examines how the participants engaged with these discourses, focussing in particular on determining the discursive practices and disciplinary techniques through which these discourses became dominant. I make overt use of the work of Foucault on techniques of power (1977; 1998), and technologies of the self (1990) in understanding what influenced participants to take up or resist dominant discourses (Wright, O'Flynn, & Macdonald, 2006).

5.2 Discourses underpinning pain and injury acceptance

5.2.1 The logic of competing

Within the sporting context the practices involved in producing athletes are often a necessary means of success. For example, the desire to win often structures the choices and decisions made by athletes regarding issues such as pain and injury. Heikkala (1993) married the Foucauldian concepts of discipline and technologies of the self with the rationale of competing, which was termed ‘the logic of competing’. According to Heikkala (1993) discipline is justified in

sport because the goal, which is often victory, demands it. This drive to compete, or competitive discourse (Walters, Payne, Schluter, & Thompson, 2012), was evident in all seven participants' talk, and was epitomised by Anna when she said "in gymnastics it's always competition season". Six of the seven participants admitted to training through pain, or pain and injury, with all six stating competitions as their reason.

This drive to compete caused some of the participants to engage in *surveillance* (Gore, 1995),⁸ which was manifested in hiding injuries, or avoiding the injuries being seen. When questioned about hiding injuries, Sarah, Anna and Louise stated that they had hidden injuries from their coaches. Furthermore, Sarah responded, "I think every gymnast has, to be honest", indicating that she engaged with *totalisation* (Gore, 1995)⁹ by positioning gymnasts in collective ways. Sarah understood hiding injuries to be something that 'all' gymnasts did. When prompted about the reasons behind hiding their injuries, the participants' responses surrounded the reluctance to deviate from their training schedule due to the concern for the consequences of doing so. For example, Anna said, "I didn't really care if I would injure myself. I just wanted to be the best I could". Both Lauren and Ellie expressed this concern:

I always hated the feeling of sort of being left behind. So if I had to have a session off tumbling that's another session that somebody is getting better at tumbling. (Lauren)

⁸ Gore (1995, p. 169) defined *surveillance* as "supervising, closely observing, watching, threatening to watch, [and] avoiding being watched".

⁹ Gore (1995, p. 179) defined *totalisation* as "the specification of collectivities, giving collective character".

If you stop for so long then it takes you double that time to get back to where you were. (Ellie)

Indeed, some of the participants stated that their coach would have prohibited them from participating in activities or tasks that might have aggravated the injury and hindered their progress. This was consistent with findings made by Liston, Reacher, Smith and Waddington (2006) as the rugby players in their study limited the frequency with which they were able to play if they were not willing to play with an injury. When asked why Anna hid her injuries, she said, “because I was worried that she [coach] was going to say stop, so I carried on anyway.” Failure to fulfil plans made in order to achieve success results in discontent, or an internalised “bad conscience” (Nietzsche, 1990, as cited in Heikkala, 1993, p. 401). It is little wonder, therefore, that athletes train through injury, because they are afraid that they will “fall behind” (Lauren) in their training, or be “withdrawn from competitions, which can effect selection for events” (Louise).

It was fear that motivated Lauren to engage in *surveillance* by concealing injuries from her coach. When asked whether she hid injuries from her coach, Lauren responded:

All the time! ... You're scared to tell the coach that you're injured because they get angry [*nervous laugh*]. (Lauren)

Her laugh indicates a nervous disposition where she may be trying to convince herself and me that the fear of her coach was not as bad as it appeared. This

suggests that Lauren's coach engaged in disciplinary *regulation* (Gore, 1995)¹⁰, creating the fear of punishment. Indeed, Foucault (1977) argued that the very institution of punishment arouses fear, thus regulating people to conform to strict directives. Katie also experienced *regulation* as she revealed that she behaved as her coach told her to because she was "terrified" of her coach because she would "just get yelled at" for disobeying.

When the participants in this study were injured, another form of *surveillance* was employed, this time by the coaches. All of the participants interviewed were subjected to *surveillance* as a form of *regulation* and self-regulation.

Participants were required to come into the gymnasium so the coach could ensure that they were still contributing to their training by doing "rehab exercises" (Sarah) or "conditioning" (Grace). By being present in the gymnasium, the participants were in view of the coach, however none of the participants revealed any inclination that they were aware of being watched.

External control and discipline is only half of the story (Heikkala, 1993). Success in sport requires self-discipline and self-regulation. The aforementioned examples of *surveillance* had powerful effects on the *regulation* and self-regulation of participants' injuries (Webb, McCaughtry, & Macdonald, 2004). Similar to the results found by Webb et al. (2004) and Johns and Johns (2000), participants internalised their coaches' gaze, causing them to structure their behaviour in accordance with the discourses presented to them. For instance, Sarah engaged in self-surveillance and self-regulation to make sure that she did not "halt progress" with her injuries by "not doing anything that I shouldn't be doing" when not in the gymnasium. According to Webb and Macdonald (2007,

¹⁰ Gore (1995, p. 180) defined *regulation* as "controlling by rule, subject to restrictions, invoking a rule, including sanction, reward, punishment".

p. 281) *surveillance* functions as a technique of power because it “perpetuates, creates or prescribes” behaviour according to the dominant discourses. In this case, behaviour was influenced by the competitive discourse so that participants were in the optimum condition to compete.

Alongside *surveillance*, *distribution* (Gore, 1995)¹¹ was used to isolate participants from the rest of the group. For example, even when participants were required to attend training sessions when they were injured, they were separated from mainstream training. When Katie was asked how she was treated by her coach while she was injured, she said, “Erm, you were kind of ignored if I’m honest... And I was kind of put to the side a bit.” Here, the coach utilised *distribution*, isolating Katie from practice. This is an example of the overlapping influence of the techniques of power, where *surveillance* led to the participant being isolated, as though she was being punished for being injured. This in turn normalised concealing and training through injuries.

The techniques of *normalisation*¹² and *exclusion*¹³ often occur together (Webb & Macdonald, 2007), with *exclusion* usually being the reverse side of *normalisation* (Gore, 1995; 2002). In this study, *exclusion* served to normalise certain practices and ‘truths’ regarding the acceptance of pain and injury in gymnastics. Several of the participants revealed that their coach often did not accept that they were in pain or injured. For example, Louise commented:

¹¹ Gore (1995, p. 176) defined *distribution* as “arranging, isolating, separating, [and] ranking” bodies in space.

¹² Gore (1995, p. 171) defined *normalisation* as “invoking, requiring, setting or conforming to a standard – defining the normal”.

¹³ Gore (1995, p. 173) defined *exclusion* as “tracing the limits that will define difference, defining boundaries, [and] setting zones”.

Erm, with my back I was aware that something was wrong but the coaches didn't believe that anything was wrong so they didn't listen to me, so I kind of just had to keep training. (Louise)

For Louise, her coach's refusal to acknowledge her injury caused the stress fracture in her back to worsen, until she was forced to take a two-year break from gymnastics. Even after this period of recovery, Louise went back to gymnastics before her back had fully healed because she was told to by her coach, stating, "it was their decision." These findings aligned with those made by Malcom (2006), whose participants' complaints about injury were ignored by the coach. This is an example of the repressive side of Foucault's technologies of power. Furthermore, Louise was discouraged from displaying that she was in pain when she was told by her coach to "stop making a face" and "deal with it". By defining this reaction to pain as abnormal, Louise normalised pain, which was exemplified when she commented, "it was just something that I saw was expected of me, just to be able to deal with the pain."

Totalisation was evident in all of the participants' talk, with use of the word "they" to refer to people outside of gymnastics. The participants convinced themselves that their acceptance of pain classified them as special and superior to "normal people". Furthermore, Lauren, Katie and Grace engaged in the technique of *individualisation* (Gore, 1995),¹⁴ when they boasted about having a "high pain threshold". This attitude towards pain glorified its acceptance, which made it easier for them to normalise pain. Louise provided another example of

¹⁴ Gore (1995, p. 178) defined *individualisation* as "giving individual character to oneself or another".

exclusion and *classification* (Gore, 1995)¹⁵ enacted by friends and family when she described her friends as being “pretty unsympathetic” towards her pain, as they made her feel that the pain was her “own fault”. This aligns with Theberge’s (2008, p. 207) contention that the meanings associated with pain are “conditioned by social location”. What Louise considered to be normal behaviour was considered abnormal by her friends, because they had not been exposed to the same normalising practices. Furthermore, Louise described how her parents engaged in *normalisation* as they became “desensitised” to her pain. In these cases, power was being exerted over the participants through *classification* by the assigning of certain expectations based on the expected norms of that *classification* (McCormack & Gore, 2008). This further influenced the *normalisation* of pain and injury.

5.2.2 Differentiating between “good pain” and “bad pain”

It was demonstrated in Chapter Two that the literature on pain focussed on pain as a by-product of injury, with the objective of such research being to relieve or eliminate pain (Bale, 2006), rather than to understand it. In this study all seven participants recognised the multiplicity of pain and engaged in *classification* by differentiating the different types of pain that they experienced whilst training. This was exemplified by Louise when she stated, “Well, obviously there are lots of different types of pain in gymnastics.” Her matter-of-fact understanding of pain typifies the responses made by the participants, suggesting the engagement with *normalisation*. When questioned further on the “different types” of pain, most of the participants were able to separate pain into two distinct categories. Comments included:

¹⁵ Gore (1995, p. 174) defined *classification* as “differentiating groups or individuals from one another, classifying them, classifying oneself”.

You get to learn the difference between obviously, stretching pain and your injury pain. (Sarah)

Conditioning was kind of a daily thing. And injuries obviously, erm kind of experienced that a lot but its something I think you kind of get used to in gym. (Louise)

Yes, erm, good pain you feel it in conditioning... Erm, yeah you can feel when something is not right because you train the skills over and over if something feels different you're kind of like that shouldn't have happened. So you are able to tell the difference. (Grace)

The categories that the participants used to define pain were: "good pain" and "bad pain". This finding was consistent with those made by Nemeth et al. (2005) regarding the participants' abilities to determine whether pain was serious enough to "merit reaction" (p. 621). Furthermore, participants were confident that they could accurately decipher whether certain types of pain would lead to injury or lead to improvement in "conditioning". Louise was able to locate the different types of pain: "by the end I was pretty like accurate with telling the difference between a muscle pain and maybe a ligament or a bony pain." The participants associated muscular pain and pain as a result of conditioning the body as good and beneficial. They also associated pain in and around their joints and bones as bad pain, which was likely to lead to injury. Ellie said:

I mean you can always tell if the day before you might have a really good session, and you've woken up and you're hurting but you're hurting for good reasons, you know you've worked well. Your body is obviously getting stronger or it's improving. Then obviously you've got your bad

pain, you can normally tell... hang on that doesn't feel right. Obviously that's a bad pain, which could lead to obviously an injury. (Ellie)

The “good pain” that they experienced during and after conditioning was considered not only acceptable, but necessary as a means of improving their performance. For instance, Ellie commented, “If you want to go far in your career then you’ve got to put up with the pain.” The participants used pain as a benchmark of success; a measure of how triumphant a training session had been. Their coaches, who assured them that feeling this type of pain was “normal”, reinforced this. Sarah described how her coach would say, “we’ve pushed you quite hard, your muscles are going to ache, you’re going to be in a bit of pain.” This example depicts how Sarah’s coach used *normalisation* in order to define this particular type of pain as normal. These findings align with Malcom’s (2006) findings about how coaches used strategies such as telling the athletes directly that the pain was not a concern. This encouraged Sarah to engage in normalising practices, whereby pain was further normalised. According to Taylor (2009, p. 47) *normalisation* encourages subjects to “become highly efficient at performing a narrowly defined range of practices”. In this case, repeated persistence through pain became an embedded behaviour which was no longer perceived as unusual, but as “normal”. In fact, Katie described pain as “imminent” and “inevitable”, suggesting that she thought it was unavoidable.

Sarah spoke of the difficulty her coach had with distinguishing the good from the bad pain experienced by her gymnasts when she commented:

But for them it is quite difficult to draw the line and say like, the difference between just everyday training pain to actual injury pain... their job is to

get the best out of you and sometimes they turn off their emotions a bit and kind of just push you and push you until you do break a bit. (Sarah)

This indicated that Sarah empathised with her coach, and understood why her coach subjected her to control and discipline. Sarah rationalised this behaviour as normal because she knew that “some gymnasts will say that they are in pain just to avoid doing a certain skill or a certain activity that they don’t like”. She described how her coach became familiar with this “kind of system” making it difficult for them to believe when a gymnast was in pain. Similarly, after being shouted at by her coach for complaining that she was in pain, Katie said that “it’s understandable” because gymnasts sometimes “fake it”.

Normalisation can work as a mechanism for *classification* and ranking as it introduces “all the shading of individual differences” (Foucault, 1977, p. 184).

The power of normalization imposes homogeneity; but it individualizes by making it possible to measure gaps, to determine levels, to fix specialties and to render the differences useful by fitting them one to another.

(Foucault, 1977, p. 184)

In this study the participants often separated themselves from “normal people” (Louise) outside of gymnastics. For example, Sarah said, “I think pain is different for them than it is for us.” Several of the participants stated that people outside of gymnastics, including friends and family, “didn’t understand” their pain or injury. For instance, Anna commented:

They [friends] didn't really understand how much pain I was in because they hadn't suffered whatever hurts the same way you had. They would be like "oh, you will be fine. (Anna)

Anna defended her tolerance of pain, stating, "a general person wouldn't be able to take that". Katie justified her acceptance of pain by downplaying the seriousness of her experiences with pain:

Something that would be little for me would be really dramatic for someone who doesn't do sport because they just don't... they're not used to seeing people in pain on a regular basis. (Katie)

When questioned about *when* and *how* the participants learnt to differentiate between "good pain" and "bad pain", Sarah, Louise and Katie said that it happened early in their careers. Sarah attributed this to being told by her coach that training was "going to hurt but it's necessary". She argued that being provided with the reasons why pain was necessary was important when she was younger, as too were the role models of older gymnasts. Sarah aspired to be like the older gymnasts, who had already normalised pain, which served as a normalising practice to internalise "good pain" as necessary. Louise said that "some sort of pain and injury" was "trained into" her when she was younger and she was told by her coach that, "sometimes there will be times where you just have to deal with it, even if it hurts." Louise described how this built up after being told it every day, which normalised pain.

The previous examples of the participants being told by their coaches that "pain is normal" illustrate the power relations inherent within the gymnasium. The participants viewed their coaches as figures of authority. According to Foucault

(1982, p. 792) power relations operate through a “system of differentiations which permits one to act upon the actions of others”. The differentiations existing in the coach-gymnast power relation was based on “traditions of status” and “differences in know-how and competence” (Foucault, 1982, p. 792). Indeed, Louise said that her coaches “thought they knew best”, which is why she followed their instructions and re-joined training before her injury had fully healed. This depiction of the coach as dominant was further emphasised when Katie was asked how often she trained through injury: “More so when you are younger because you tend to do as you’re told.” This also highlights Foucault’s contention that power, knowledge and discourse are connected (Hall, A., 2001, p. 75), in particular, how the coach’s knowledge was “put to work through discursive practices” in order to exercise power over the participants.

When Louise was questioned about *how* she learnt to tell the difference between “good pain” and “bad pain”, she said that she learnt what bony pain was after her first serious injury. This suggested that the participant had to experience the different types of pain unmediated, including the serious pain that led to injury, before they could fully understand and “avoid crossing the “fine line” to injury” (Nemeth, 1998, p. 5). This places gymnasts under serious risk of suffering an injury that could potentially affect the rest of their lives. Unfortunately, in gymnastics a serious incident must first occur before parameters are put in place to reduce risk. For example, it took the life-debilitating accident of the paralysis of Elena Mukhina to merit the removal of the ‘Thomas salto’¹⁶ skill from the Code of Points¹⁷ (Benn & Benn, 2004). By

¹⁶ A Thomas salto is a gymnastics skill involving backward 1 ½ somersaults with 1 ½ twists.

drawing attention to the multidimensional embodiment of pain in gymnastics, gymnasts' experiences with pain appear more pervasive than the gymnasts' refined aesthetic performances would suggest. A deeper understanding of pain may prevent future incidences like this from happening.

5.2.3 Increased tolerance of pain, decreased tolerance for injury

The findings thus far have highlighted the multiple and often conflicting relationships that the participants had with pain and injury. The third discourse evident within the data proposed that participants had a high tolerance for pain compared with a lower tolerance for injury. This discourse appeared to arise from the previous discourse concerning the *normalisation* of "good pain" as a necessary measure of performance in training sessions. Furthermore, this discourse can be linked to the 'logic of competing'. A decreased tolerance for injury can be associated with the justification that "bad pain" may lead to, or cause injury, and therefore disrupt training schedules and plans for competition success. This highlights the interconnected and overlapping nature of discourses.

The differing attitudes towards pain and injury were evident when the participants were asked how often they trained through injury, and then how often they trained through pain. These were some of the responses to the first question:

Erm, training through injury... there were quite a few times where the injury wasn't fully healed but we started training again anyway. With most

¹⁷ Code of Points – a document that regulates women's artistic gymnastics, classifying all elements/skills (Barker-Ruchti, 2009).

injuries you spent a short amount of time with that injury training with it until it was fully diagnosed or fully healed. (Louise)

[laugh]... with all of them I trained when injured. (Anna)

Hmm, not very often. Erm, especially once I had the operation and it was quite obvious I had this problem. (Katie)

These were some of the responses to the question about pain:

I think about 90% of the time... like there wasn't a day that I didn't wake up in pain. (Sarah)

It was probably most days. I trained six days a week so I'd say five out of the six days I'd be in pain, with some sort of pain. (Louise)

Erm, being older probably most days. (Anna)

These excerpts illustrate further the multiple and conflicting ways that participants engaged with pain and injury. Despite the discrepancies amongst the participants relating to the extent to which they trained through injury, there is a notable difference in the tolerance for injury compared to the tolerance for pain. The participants were more open about their training through pain, like the participants in Charlesworth and Young's (2006) study on female athletes, with most of the participants stating that they trained through pain on a regular basis. Particularly with the experience of what they termed "good pain", the participants in this study viewed pain as a boundary that needed to be crossed (Aalten, 2005). For example, with regards to conditioning, Sarah said, "obviously if you push your body enough you're going to be in pain" and "you push yourself as much as you can push yourself" because people often say, "no

pain, no gain". These quotations illustrate that Sarah engaged in *normalisation* by implying that pain is necessary in order to improve performance.

Foucault's (1990) technologies of the self asserts that individuals are not "merely passive recipients" (MacLure, 2003, p. 19) of discourses but can counter the technologies of power (Markula, 2003). While participants were subjected to the normalising discourse of accepting pain and injury as necessary to improve their performance, some of the participants were able to resist this discourse. For example, Anna said that towards the end of her career she knew when she needed to rest, and by the time she was eighteen and nineteen she was able to make the decision as to whether she should continue training. Sarah, too, engaged in this behaviour, whilst also engaging in the technology of the self of self-awareness (Foucault, 1991). Sarah said, "If it [pain] got to a certain level I would mention something to the coach". This resistance allowed them to exercise some freedom, albeit "within the limits of their sporting context" (Markula, 2003, p. 90). For example, although Sarah displayed a certain degree of self-regulation by listening to her body when it was in pain, her coach would often not believe her concerns. Furthermore, Katie was not able to exercise complete freedom, as she recalled often having to make compromises with her coach when injured. The compromises included completing "three instead of six" exercises, or training "only an hour and a half in the evenings instead of three hours". Foucault (1998) recognised that power relations can shift over time. The previous examples illustrate how the participants were able to resist some of the power imposed by the coaches towards the end of their careers. However, this power shift was neither *to* nor *from* positions of absolute power and absolute powerlessness.

In order to engage in technologies of the self, the individual must problematise the codes that govern their actions (Markula & Pringle, 2006). Athletes must think critically about the practices involved in being an athlete. Only then can an athlete engage in “practices of freedom” (p. 153). Chapman (1997, p. 208) argued that technologies of the self empower individuals to engage in “practices of taking care of the self”. The decision to refrain from or cease training through injury was made because of the concern over safety, and therefore the engagement in the technology of the self of “ethical self-care” (Markula, 2003, p. 98). The following examples illustrate the growing concern over the participants’ own safety:

But at the end of the day, the worst the coach can do is shout at you.

And you have to think about your own safety at the end of the day.

(Sarah)

I wouldn’t do anything where I think, God I’m going to break my neck. I’d just refuse to do it because I don’t like to put myself in situations where I cause myself pain. (Katie)

The above excerpts are examples of how the participants began to problematise training through pain and injury. Furthermore, the participants engaged in self-reflection (Foucault, 1992) during the interviews when they were asked if they ever considered the long-term effects of training through pain and injury. Sarah, Louise, Katie and Ellie didn’t consider the long-term implications until they obtained serious injuries towards the end of their careers. In all four cases it was a serious injury or an accumulation of injuries that ended their careers. For example, Sarah didn’t consider the effects of training through pain and injury until her back fracture was diagnosed and she was “shocked”

into realising that the injury could potentially affect the rest of her life. Similarly, Louise said that the seriousness of her back injury “became a bit more real” when she was told by a doctor that she would need surgery. Furthermore, Louise engaged in critical self-awareness when she recalled how her “stubborn” behaviour of training through pain and injury was going to affect her for the rest of her life. The fact that she criticised herself by using the word “stubborn” suggests that she regrets training on the injury. These findings were similar to those made by Liston et al. (2006) who argued that the health risks of playing through pain and injury were “brought into sharper relief” only after participants talked to GPs, physiotherapists and coaches. This proves to be an alarming prospect considering the potential for life threatening injuries by participating in gymnastics.

5.3 Summary

This chapter has examined the three discourses that were evident from the analysis of the data and the ways in which the participants engaged with these discourses. The findings made in this chapter are similar to those reported by Barker-Ruchti (2008) and Barker-Ruchti and Tinning (2010), insofar as the participants were subjected to discipline and control by their coaches. All eight techniques of power outlined by Gore (1995) were prevalent throughout the data. *Normalisation* was particularly evident, with *surveillance*, *exclusion*, *classification*, *distribution*, *individualisation*, *totalisation* and *regulation* serving to reinforce the *normalisation* of pain and injury discourses. This chapter highlighted how the overlapping and interconnected nature of the techniques of power influenced the three discourses to become dominant, and ultimately taken up by participants. Furthermore, the three discourses discussed in this

chapter were closely interconnected in the participants' talk. For example, when participants referred to training through "good pain" as a means of improving performance, to be able to compete at the highest level of gymnastics.

According to Foucault (1997) techniques of power and technologies of the self rarely function separately. By using both techniques of power and technologies of the self in the analysis of how discourses were taken up or rejected by participants, this chapter has highlighted that the participants were "not merely passive recipients of this discourse" (McEvilly, 2012, p. 255), but were able to make choices surrounding the engagement or rejection of certain discourses. In contrast to the findings made by Barker-Ruchti and Tinning (2010) surrounding the ways in which participants engaged with technologies of the self, this research found that some of the participants were able to problematise pain and injury discourses and resist some of the techniques of power towards the end of their careers. Unlike Barker-Ruchti and Tinning (2010) who suggested that the gymnasts in their study appeared to have "minimal resources for resistance or self-determination" (p. 233), some of the participants in this study were able to counter the discourses of training through pain and injury, and engage in ethical self-care in order to prevent injury. However, not all of the participants were able to exercise this agency, with some of them ultimately learning to cope with the disciplinary control. In Chapter Six I draw this research to a conclusion, discuss the limitations of the study and suggest recommendations for future research.

6.0 Chapter Six – Conclusion

6.1 Introduction

The aim of this research was to examine the discourses which were influential in the participants' experiences with pain and injury in women's artistic gymnastics. This involved identifying the dominant pain and injury discourses, and examining the complex ways in which the participants engaged with these discourses. The purpose of this research was not to claim superiority for a sociological understanding of pain and injury, but to provide a complimentary addition to the research that already exists from the medical, epidemiological and psychological perspectives. Previous literature on pain and injury, specifically in the context of gymnastics, is inconclusive on the process by which pain and injury are normalised. This research sought to answer this primary research question:

(1) What discourses have been influential in former gymnasts' experiences with pain and injury?

In order to investigate this question, two sub-questions were used:

- (1) How did former gymnasts engage with the discourses of pain and injury?
- (2) Through what discursive practices and disciplinary techniques did the discourses of pain and injury become dominant?

To address these questions a poststructural, Foucauldian theoretical framework was used, focussing in particular on Foucault's work on discourse, techniques of power and technologies of the self. The poststructural perspective helped provide a context-specific analysis of the workings of pain and injury discourses,

while the Foucauldian theoretical framework, and in particular Gore's (1995) techniques of power, provided the tools to interrogate the multiple layers of the discourses. The techniques of power also guided me towards questioning the power relations that were evident, or indeed hidden, amongst the data. Furthermore, the technologies of the self allowed for the investigation of the participants' conscious involvement in taking up and resisting discourses.

6.2 Findings

6.2.1 Discourses of pain and injury

The first stage of analysis involved identifying the dominant discourses. In analysing the participants' talk, three discourses were evident amongst the data. Firstly, the gymnasts' justifications for training through pain and injury were based on their desire to compete (Walters et al., 2012). This was evident in the participants' reasons for training through pain and injury, with six of the seven gymnasts admitting to training through pain and injury due to competition goals. Secondly, all seven participants recognised the multiplicity of pain, and were able to classify pain as either "good" or "bad". "Good pain", caused by conditioning, was perceived as positive and beneficial, whereas "bad pain" was perceived as negative, and likely to lead to injury. Thirdly, the gymnasts had a high tolerance of pain, compared with a lower tolerance of injury. Upon learning to differentiate between different types of pain, gymnasts were able to problematise "bad pain" which was associated with injury. Some of the participants engaged in ethical self-care and critical self-awareness, which allowed them to problematise the dangerous practices that could possibly lead to injury, thus hindering their chances of competing. The discourses prevalent

throughout the data did not operate in isolation, but were overlapping and interlinked.

6.2.2 Gymnasts' engagement with pain and injury discourses

The participants engaged with discourses of pain and injury in complex ways. Based on my interpretation of the empirical data, I argue that although discourses of pain and injury were entrenched in the discursive practices of elite gymnastics, there were opportunities for the gymnasts to resist these discourses and act upon their own agency. This was evident when participants spoke about the end of their careers, when some of them started to make their own decisions regarding training. For instance, Sarah and Katie refrained from training through injury after problematising the high-risk skills they were being asked to perform. This resistance, however, was only exercised within the limits of the gymnastics context. For example, instead of complete resistance, Katie often made compromises with her coach, suggesting only a slight shift in the power relation (Foucault, 1998). The diversity in the ways in which the gymnasts engaged with pain and injury discourses was further evident in the participants' talk about their perceptions of pain and injury. For example, Sarah perceived injury to be necessary, whereas Louise saw injury as something that was normal, but not necessary. Further research is needed to investigate how discrepancies occur in the ways in which gymnasts invest in certain discourses.

6.2.3 The process by which these discourses became dominant

The participants' talk illustrated the multiple and complex ways in which the discourses of pain and injury became dominant and were taken up by the participants. This process was influenced by the techniques of power and technologies of the self. All eight techniques of power (Gore, 1995) were

prevalent throughout the data, and influenced the normalisation of pain and injury. Furthermore, the technologies of the self revealed the gymnasts' capacity to consciously take up the discourses of pain and injury. For instance, the gymnasts' drive to attend competitions and succeed meant that they were willing to train through pain and injury, in order to achieve their goals. This suggests that they consciously engaged with the competitive discourse. The participants' coaches appeared to be firmly positioned within all three discourses, using their power to encourage training through pain and injury. Foucault contended that power is not solely repressive, but it can be positive and productive (Burrows, 1999). Although the coaches may be perceived to be controlling the participants' behaviours, the coaches were exercising power in order to develop the participants' capabilities. This research has shown, therefore, that pain and injury discourses become internalised by a combination of disciplinary techniques enforced by the coaches and the gymnastics context, as well as self-regulating technologies enforced by the participants themselves.

6.3 Significance of the results

This research has contributed to the literature on competitive discourses in sport, by suggesting that coaches prescribed training through pain and injury to the participants as a necessary means of achieving success. This influenced the gymnasts to normalise training through pain and injury, which implies that pain and injury are not simply unfortunate and unintended consequences of gymnastics, but purposeful and sometimes deliberate obligations of the pursuit for excellence. This research will hopefully draw attention to the potentially harmful consequences of the uncritical acceptance of pain and injury discourses, and therefore the importance of researchers, policy-makers,

coaches and gymnasts critiquing these discourses. For instance, this analysis has demonstrated the implications of training through pain and injury, which in Sarah's example, led to her incurring a back fracture, which will affect her for the rest of her life. Researchers, policy-makers, coaches and, most importantly, gymnasts must ask themselves: is success worth the price of safety? In order to ensure the safety of young gymnasts, the 'truths' on what it takes to be successful must be further problematised. Therefore, I align with Walters et al. (2012) who argued that researchers must question the current practices surrounding the competitive discourse, in order to create spaces for new practices.

6.4 Limitations and future recommendations

As noted in Chapter One, it is important to recognise and acknowledge any biases I brought to the data generation and analysis. It was my intention to approach participants as an outsider (Taylor, 2001), and not to reveal information about my identity as a former gymnast. This was done to minimise the influence on the participants' responses by not assuming any common interests. Nevertheless, some of the participants referred to specific gymnastics terms, assuming I was familiar with them because I was involved in gymnastics research. It is difficult to determine what effect this had on the participants' responses; it may have encouraged answers that would not otherwise have been considered, or possibly discouraged them from talking about certain topics (Taylor, 2001).

This research has offered an insight into the practices involved in elite level women's artistic gymnastics, which was done using an interviewing technique. As a consequence of employing this particular method, data consisted of

recalled accounts of the participants' experiences, rather than direct observations of the workings of pain and injury discourses. Furthermore, this research focussed on the accounts of a small number of gymnasts. Research with a larger sample would provide further insight into the practices of elite level gymnastics. Nevertheless, the results of this research act as a building block for future research into the workings of pain and injury discourses in gymnastics. In order to examine the power relations, techniques of power and technologies of the self at work, I propose that similar research should be undertaken utilising an ethnographic method, for example direct observation.

Interrogating the ways in which the former gymnasts engaged with pain and injury discourses is only one aspect of the workings of a larger "institutional web of power" (Ball, 2004, p. 71). Furthermore, as this research recognised the significance of the coach-athlete power relation, which supports the current literature on the role of the coach (Gervis & Dunn, 2004; Pinheiro et al., 2012), future examination of the gymnastics context, through such methods of direct observation, could examine the workings of discourses within this broader web of power. It would allow for a focus, not only on the gymnasts' engagement with discourses, but also, on the ways in which coaches, parents and physiotherapists contribute to the construction and uptake of discourses.

6.5 Concluding thoughts

This study has indicated that pain and injury discourses were normalised through a combination of disciplinary techniques and technologies of the self, to the detriment of the safety of some of the participants. Using a poststructural, Foucauldian theoretical framework allowed me to interrogate the taken-for-granted practices associated with pain and injury in gymnastics, which had not

been addressed before. While it is beyond the scope of this research to provide the impetus to change practices relating to pain and injury in gymnastics, it raises serious questions about the ways in which gymnasts may develop an uncritical acceptance of training through pain and injury. If this research has any use, it will be as a modest contribution to efforts towards injury prevention in gymnastics. Above all, I hope to have shown that ‘truths’ surrounding pain and injury are all too easily constructed, applied, and guarded.

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Appendices

Appendix A – Interview guide

Gymnast No:		
Date:	Time:	Venue/Method:

Demographic Information

Gymnast's Name: _____

Club(s): _____

Number of clubs: _____

Level reached: _____

Elite career length (Years): _____

Total years of doing gymnastics: _____

Age of starting gymnastics: _____

Age at retirement: _____

Reason(s) for retirement:	Injury (specific)	<input type="checkbox"/>
	Injury (accumulation)	<input type="checkbox"/>
	Fulfilled goals	<input type="checkbox"/>
	Lost interest	<input type="checkbox"/>
	No longer enjoying the sport	<input type="checkbox"/>
	Family commitments	<input type="checkbox"/>
	Other: _____	<input type="checkbox"/>

Occupation after retirement: _____

Current occupation: _____

Involved in gymnastics: _____



FOLLOW UP QUESTIONS

Can you tell me what you *mean* by _____?

Can you tell me *more* about _____?

Can you *explain* _____?

Can you give me an *example* of _____?

Can you tell me *why you think* this?

Can you tell me how this *came about*?

What if I said to you _____? What do *you think*?

1) Can you tell me about how you got into gymnastics?

2) Can you tell me about any injuries you obtained through gymnastics?

i) Were you ever unable to train due to injury?

ii) What were your reasons for not training?

iii) How did being injured make you feel?

3) Can you tell me what you think injury is?

4) What is your attitude towards injury? What do you think of injury in gymnastics?

5) Did you ever train whilst injured?

i) How often did you experience training through injury?

ii) What were your reasons for training through injury?

iii) Did you ever hide your injury from people? Why?

6) How did your coach treat you when you were injured?

7) How did other gymnasts treat you when you were injured?

8) How did people outside gymnastics treat you when you were injured? Did you continue with other activities whilst injured? School etc.



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9) Can you tell me anything about your experiences with pain in gymnastics?

10) Can you tell me what you think pain is?

11) What is your attitude towards pain?/What do you think about pain in gymnastics?

12) Did you ever train through pain?

i) How often did you train through pain?

ii) What were your reasons for training through pain?

iii) Did you ever hide your pain from people around you? Why?

13) How did you learn to deal with pain?

14) How did your coach treat you when you were in pain?

15) How did other gymnasts treat you when you were in pain?

16) How did people outside gymnastics treat you when you were in pain?

Continue with other activities?

17) Did you ever think/worry about the long-term impact of pain and injury on your body?

18) Have there been any lasting effects of training through pain and injury?

19) Does your attitude towards pain and injury differ to those people who don't do gymnastics?

Appendix B – Letter of ethical approval

Ruby Tynan
Department of Sport and Exercise Sciences
University of Chester
Parkgate Road
Chester
CH1 4BJ

19th March 2014

Dear Ruby,

Study title: A sociological study of the normalisation of pain and injury
in elite-level female artistic gymnasts.
FREC reference: 880/14/RT/SES
Version number: 2

Thank you for sending your application to the Faculty of Life Sciences Research Ethics Committee for review.

I am pleased to confirm ethical approval for the above research, provided that you comply with the conditions set out in the attached document, and adhere to the processes described in your application form and supporting documentation.

The final list of documents reviewed and approved by the Committee is as follows:

Document	Version	Date
Application Form	1	February 2014
Appendix 1 – List of References	1	February 2014
Appendix 2 – C.V. for Lead Researcher	1	February 2014
Appendix 3 – Letter of Invitation to Participants	1	February 2014
Appendix 4 – Participant Information Sheet	1	February 2014
Appendix 5 – Participant Consent Form	1	February 2014
Appendix 6 – Pain and Injury Interview Schedule	1	February 2014
Response to FREC request for further information or clarification		March 2014
Appendix 4 – Participant Information Sheet	2	March 2014
Appendix 5 – Participant Consent Form	2	March 2014
Appendix 6 – Pain and Injury Interview Schedule	2	March 2014

Please note that this approval is given in accordance with the requirements of English law only. For research taking place wholly or partly within other jurisdictions (including Wales, Scotland and Northern Ireland), you should seek further advice from the Committee Chair / Secretary or the Research and Knowledge Transfer Office and may need additional approval from the appropriate agencies in the country (or countries) in which the research will take place.

With the Committee's best wishes for the success of this project.

Yours sincerely,

Dr. Stephen Fallows

Chair, Faculty Research Ethics Committee

Enclosures: Standard conditions of approval.

Cc. Supervisor/FREC Representative

Appendix C – Participant information sheet

Participant information sheet

A sociological study of the normalisation of pain and injury in elite-level female artistic gymnasts

You are being invited to take part in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study?

This research is being undertaken on former elite-level female artistic gymnasts. The project seeks to investigate pain and injury in gymnastics and, more specifically, gymnasts' experiences of pain and injury.

Why have I been chosen?

You have been chosen because you are a former elite-level female artistic gymnast.

Do I have to take part?

It is up to you to decide whether or not to take part. If you decide to take part you will be given this information sheet to keep and asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect you in any way.

What will happen to me if I take part?

The study will involve a single informal interview between yourself and the researcher. The interview will last approximately one hour, and will be conducted at a time of your choosing. You will also be given the option to do the interview either over the telephone or an online video calling platform (Skype or Facetime). Alternatively, you may choose to be interviewed face-to-face at a place of your choosing. Interviews will be recorded.

What are the possible disadvantages and risks of taking part?

Due to the potentially sensitive nature of the topic under investigation, participants may feel some distress or discomfort talking about previous pain and injury experiences.

What are the possible benefits of taking part?

By taking part, you will be contributing to the development of knowledge around the topic of pain and injury.

What if something goes wrong?

If you wish to complain or have any concerns about any aspect of the way you have been approached or treated during the course of this study, please contact Professor Sarah Andrew, Dean of the Faculty of Life Sciences, University of Chester, Parkgate Road, Chester, CH1 4BJ, 01244 513055.

Will my taking part in the study be kept confidential?

All information which is collected about you during the course of the research will be kept strictly confidential so that only the researcher (Ruby Tynan) and the researcher's academic supervisor (Dr. Nollaig McEvilly) will have access to such information. Furthermore, any information that may allow you to be identified within the data will be changed or omitted; for example, a pseudonym will replace your real name.

What will happen to the results of the research study?

The results will be written up into a dissertation for my final project of my MSc, and potentially subsequent academic publications or conferences. Individuals who participate will not be identified in any subsequent report or publication.

Who is organising the research?

The research is being conducted as part of a MSc in Sociology of Sport and Exercise within the Department of Sport and Exercise Sciences at the University of Chester. The study is organised with supervision from the department, by Ruby Tynan, an MSc student.

Who may I contact for further information?

If you would like more information about the research before you decide whether or not you would be willing to take part, please contact:

Ruby Tynan. @chester.ac.uk.

Thank you for taking the time to read this.

Appendix D – Participant consent form

Title of Project: A sociological study of the normalisation of pain and injury in elite-level female artistic gymnasts.

Name of Researcher: Ruby Tynan

Please initial box

1. I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason and without my legal rights being affected. ☐
3. I agree to take part in the above study, and for the interview to be audio recorded. ☐

Name of Participant

Date

Signature

Researcher

Date

Signature

1 for participant; 1 for researcher